



Early timber harvesting in Kentucky and throughout Appalachia utilized crosscut saws, axes, and large logging crews to extract the timber the best way they knew. Today, the forestry profession has a much better understanding of how timber harvesting operations can be used as a woodland management tool. Unfortunately, few woodland owners work with a professional forester to plan and conduct timber harvests on their woodlands.

Timber Harvests: Do's and Don'ts

by Billy Thomas

Few woodland management practices receive as much attention, positive and negative, as timber harvesting. This should not be surprising given the amount of change that occurs quickly during a timber harvest. Understanding a few timber-harvesting basics can help in making good decisions about your woodlands and harvesting. This article provides basic information on timber harvests, who can provide assistance, how to use a harvest to improve your woodlands, and a short list of do's and don'ts.

Are we running out of trees?

The sight of log trucks on the road or a recently harvested woodland may trigger some to question if we are overharvesting. Overall, the answer is no. We are not harvesting more wood than we are growing. Most of the woodlands in Kentucky have experienced timber harvesting at some point and many have been harvested multiple times, yet the relative area of woodlands in Kentucky has increased over 3 percent in the last 70 years. A quick review of the latest Kentucky forest inventory data collected by the U.S. Forest Service and

the Kentucky Division of Forestry (see Table 1) shows that after factoring in mortality and all forms of removal Kentucky is growing more than twice the sawlog volume that is removed.

However, a closer look at the data shows that higher quality trees are much more likely to be harvested than lower quality trees. Taking the very best and leaving the rest is called 'high-grading' and can lower long-term timber value. The data also show there are differences with respect to the species that are being harvested. While Kentucky has more than 100 native tree species, only about 50 have commercial timber value; of those with commercial timber value, a relatively few species account for the majority of harvested volume. Of the 821 million board feet harvested in 2015, more than 50 percent of the volume came from

Table 1. Average growth and removals of sawlog volume in Kentucky in board feet (Intl. ¼). Source: USDA Forest Service, Forest Inventory and Analysis Program.

Annual Timber Growth	Timber Volume (Board Feet – Intl. ¼)	Annual Timber Removals	Timber Volume (Board Feet – Intl. ¼)
Average annual gross growth	2,912,420,262	Average annual harvest removals	821,362,993
Annual mortality	692,751,994	Average annual other removals	119,635,424
Average Annual Growth TOTAL	2,219,668,317	Average Annual Removals TOTAL	940,998,416

oaks with white oak accounting for 16 percent of the total volume harvested in Kentucky. White oak is currently an abundant tree with many wildlife attributes but strong market demand and the increasing difficulty in regenerating it, especially on better quality sites creates some concern for it in the long-term.

Individual Roles in a Timber Harvest

Understanding the role of each individual involved in a harvest allows woodland owners to make sure they have their interests covered and increases the likelihood of a successful timber harvest.

- **Woodland owners** are in charge of the property and have the final say in which trees are harvested. As appropriate, woodland owners should try to involve **family members and heirs** in timber harvest planning especially those likely to care for the woods in the future. Woodland owners need to ensure loggers and everyone else involved knows the boundaries, areas that need special protection and any other provisions that are important such as the use of roads, and fence and field maintenance as examples. Owners should also inform their **neighbors** that a timber harvest is planned—it is much better to resolve boundary issues before a timber harvest! At a minimum, follow the specifications in our timber trespass law, that indicates that all neighbors bordering the harvest receive a written notice via certified mail, restricted delivery, and return receipt requested at least 7 days in advance of the harvest (see http://forestry.ca.uky.edu/sites/forestry.ca.uky.edu/files/for109_0.pdf for more information).
- **Professional foresters** (ex. service foresters, industry foresters, consulting foresters) should be involved in timber harvesting planning. Their knowledge and training on how trees and woodlands grow and respond to harvesting is critical to ensure the future forest gets well established and the timber harvest meets your woodland management objectives. **Service foresters** (<http://forestry.ky.gov/regionaloffices/Pages/default.aspx>) with the Kentucky Division of Forestry can offer management assistance for no fee as well as mark the trees to be harvested for a small fee. **Industry foresters** are typically employees of a sawmill who can purchase the timber and plan the harvest. Private **consulting foresters** (<http://www.kacf.org/>) can also offer management assistance, walk woodland owners through the timber sale process, establish a timber basis for tax purposes, and represent the woodland owner's interests during the harvest for a fee or commission.
- **Loggers** play the critical, and dangerous, role of harvesting and transporting a woodland owner's logs to the sawmill. The role of the logger is to extract wood as efficiently as possible. The exact trees that loggers remove are based on what the landowner wants, market conditions, and adherence to the state mandated best management practices to protect water quality. A Kentucky Master Logger (www.masterlogger.org) is required to be on-site and in charge of all commercial timber harvests. A good logger also will safeguard residual trees as much as possible. Some loggers in Kentucky have gone above and beyond the minimum training requirements to become certified master loggers (www2.ca.uky.edu/cmlp/).
- **Timber buyers** may be a logger, a sawmill, or an independent timber buyer. Timber buyers are a party on the written contract, along with the woodland owner, and they establish the selling price of the timber once their offer or bid is accepted. Landowners are paid for their timber based on the agreed upon terms in the

written contract and should make sure the contract covers all areas of concern. Examples of timber sale contracts can be found at <https://mylandplan.org/content/sample-timber-sale-contract> and <https://tinyurl.com/p3snkel>.

- **Attorneys and tax preparers** should be involved in developing and/or reviewing your written contract. They can also help to ensure your rights are enforced and that any taxes due on the income from the timber sale are handled appropriately. For the latest information on timber taxes visit the National Timber Tax website at <https://timbertax.org>.

Timber Harvesting as a Woodland Management Tool

Timber harvests that are poorly planned and conducted are likely to yield unsatisfactory results. It is important to recognize that a timber harvest can be a useful woodland management tool to help you meet your management objectives. Below are five examples of how properly planned and conducted timber harvests can help woodland owners achieve their objectives for their woodland.

1. **Create the future woodland.** A timber harvest can set the stage for which trees are likely to dominate in the future woodland. Incorporating the knowledge of which trees are likely to respond to different types of harvests allows professional foresters to mark harvests that meet both long-term objectives and are economically feasible.
2. **Build woodland roads, trails, and firebreaks.** The equipment used in most timber harvesting operations can also be used to develop woodland roads, trails, and firebreaks. The ability to access your woodland property is critical to managing and enjoying it.
3. **Improve wildlife habitat.** Many woodland owners enjoy having wildlife on their property but may not realize that timber harvests can be beneficial to some wildlife species such as ruffed grouse and other species requiring young woodlands. A timber harvest can be a great way to create habitat and browse for wildlife - especially in areas that are dominated by woodlands.
4. **Removing sick or damaged trees.** Properly planned and conducted timber salvage operations following a disaster such as the emerald ash borer's attack on ash trees can allow woodland owners to

clean up their woodlands of dying trees and recoup a portion of the loss.

- 5. **Paying for other woodland conservation practices.** Investing a small portion of the proceeds from a timber harvest to pay for the implementation of other woodland management practices such as invasive species control allows woodland owners to forego having to pay out of pocket for those expenses.



Modern logging equipment and techniques make timber harvesting safer and more efficient. Working with a professional forester can help woodland owners increase woodland management benefits from their timber harvesting operations.

Timber Harvesting Do's and Don'ts

The following do's and don'ts are no substitute for individualized professional assistance, but they can increase your likelihood of having a satisfactory timber harvest experience that also meets your management objectives. It takes a while to grow our hardwood trees until they are economically ready to harvest, so you want to make sure you go in well informed and use the timber harvest as a management tool to get the future woodland started in the right direction.

Timber Harvesting Do's

- 1. **Do find and work with professional assistance.** Work with professionals to ensure that the timber harvest advances your management objectives. Review the individual timber harvesting roles section in this article to identify the professional assistance available to help you navigate the timber sale process.
- 2. **Do use timber harvesting as a management tool.** Planning a timber harvest as far in the future as possible allows planning and actions to ensure the woodland is ready to be harvested.
- 3. **Do utilize a written contract.** The contract can protect the woodland owner, buyer, and logger and keep everyone on the same page.
- 4. **Do monitor your woodland during and following the timber harvest.** Make sure the woodland is growing and progressing as it should following the harvest—guard against invasive plants and control them when spotted.



Photo courtesy: Renee' Williams

A timber harvest can be a useful management tool if it is conducted properly.

- 5. **Do treat your woodlands as the valuable resource they are.** Properly managed woodlands can be more productive and healthy. Too often, woodlands are forgotten until a crisis arises.

Timber Harvesting Don'ts

- 1. **Don't conduct a timber sale without a written woodland management plan.** A written woodland management plan prepared by a professional forester can help to make sure you know which trees you are selling, why you are selling them, and how the harvest can meet your management objectives.
- 2. **Don't (necessarily) take the first offer or rush into a timber harvest.** You would not sell your house without having some idea of what it is worth; why should your timber, which takes longer to grow than it takes to pay off a mortgage, be any different? How will harvesting advance your management objectives?
- 3. **Don't rely on verbal agreements to sell your timber.** Verbal agreements can lead to misunderstandings and unintended consequences.
- 4. **Don't conduct a timber harvest that degrades your woodlands.** Selective timber harvests just means that not all the trees are cut. Avoid timber harvests based only on a minimum diameter as well as those that just harvest the highest quality trees.
- 5. **Don't navigate the timber sale process uninformed.** It takes a long time to grow trees so when you decide to harvest utilize the professional assistance available before the first tree is harvested.

About the Author:

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